

Stakeholder Workshop #1

Bear Creek Watershed-Scale Stormwater Plan

Jeff Burkey

King County

Department of Natural Resources and Parks

November 4, 2015

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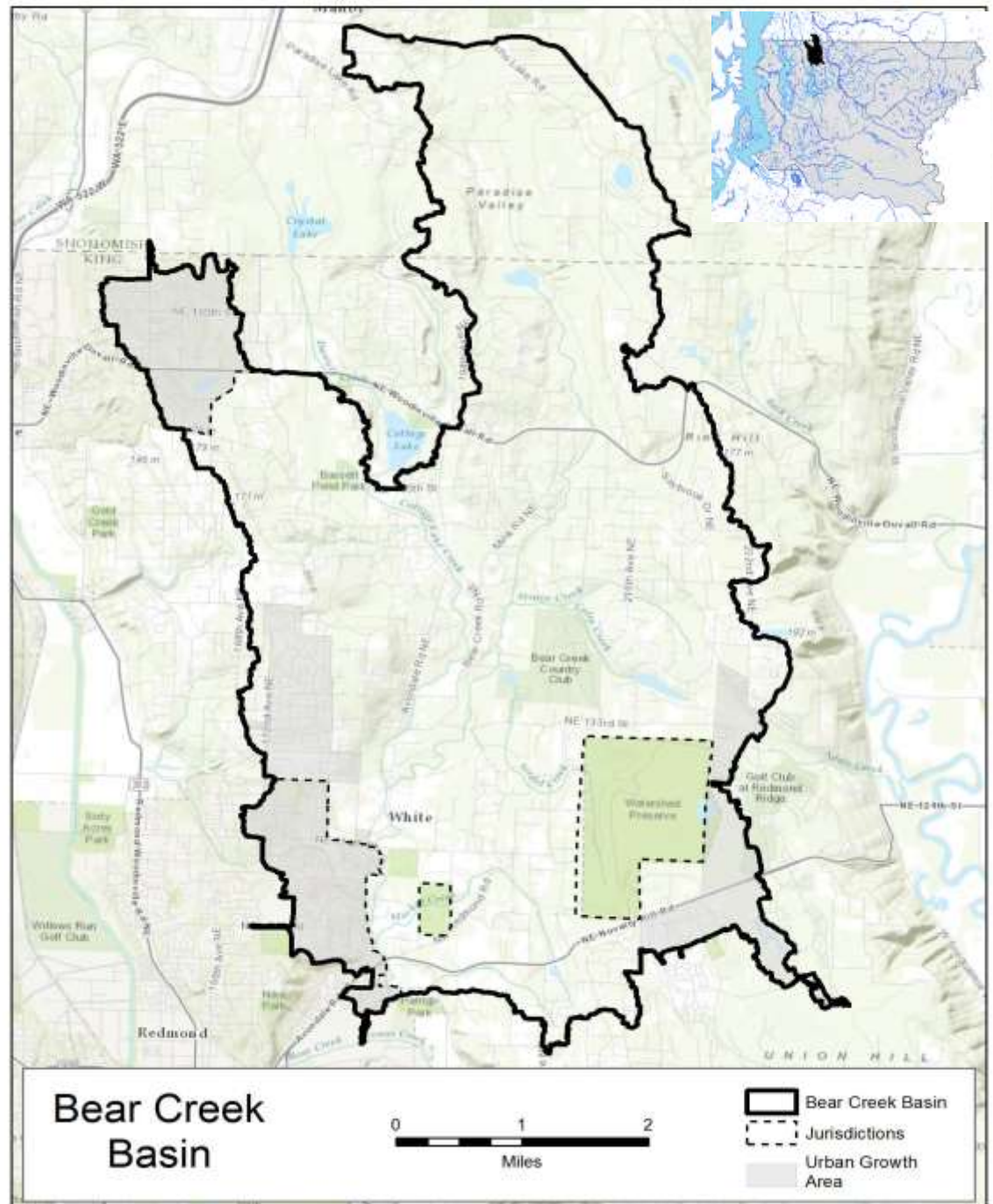
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Bear Creek Watershed* and Partners

- King County (Lead)
- Snohomish County
- City of Redmond
- City of Woodinville
- Washington State



Project Goals & Objectives

Conditions

- Mostly built before modern stormwater standards
- Redevelopment pressures
- High quality, but has known WQ problems

Goal

- Restore Bear Creek so that it provides healthy aquatic habitat for Chinook salmon and other species now and into the future.

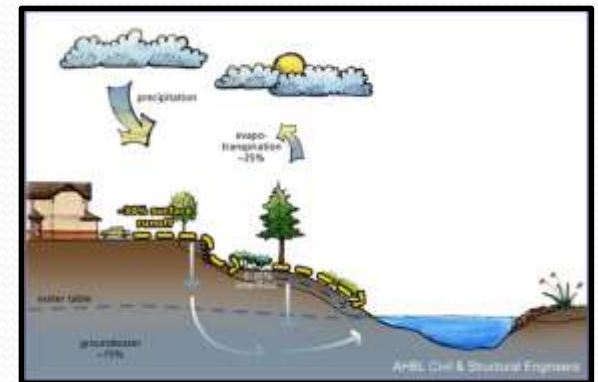
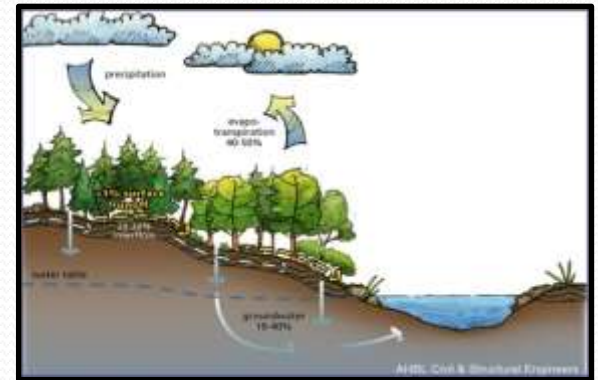
Primary Objective

- Identify a stormwater management strategy or strategies that would result in hydrologic, water quality, and stream channel habitat conditions that fully support *existing* and *designated uses*.



How are we doing this?

- Existing Conditions Assessment
 - hydrologic, geomorphic, biologic, chemistry
- Build calibrated watershed models (water quantity/quality)
 - Project necessary stormwater retrofit and policy changes
 - Identify in-stream and near shore restoration and preservation needs
- Create an Implementation Plan and Schedule



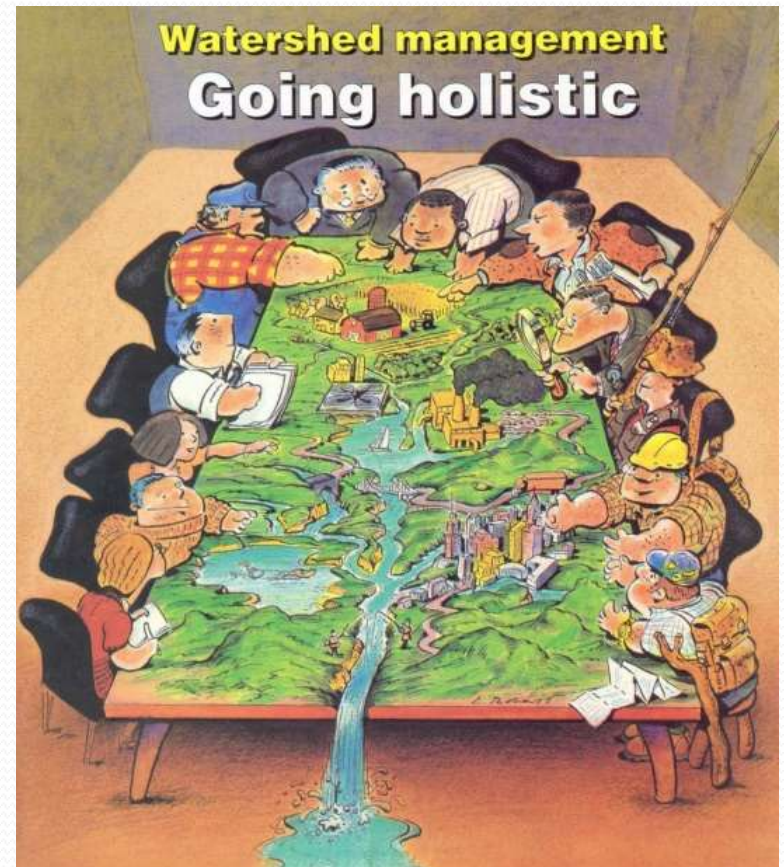
How is this effort different?

- It's a tailored plan to address the needs of Bear Creek
- Cross jurisdictional watershed planning
- More explicitly ties stormwater management to land use that supports salmon recovery efforts



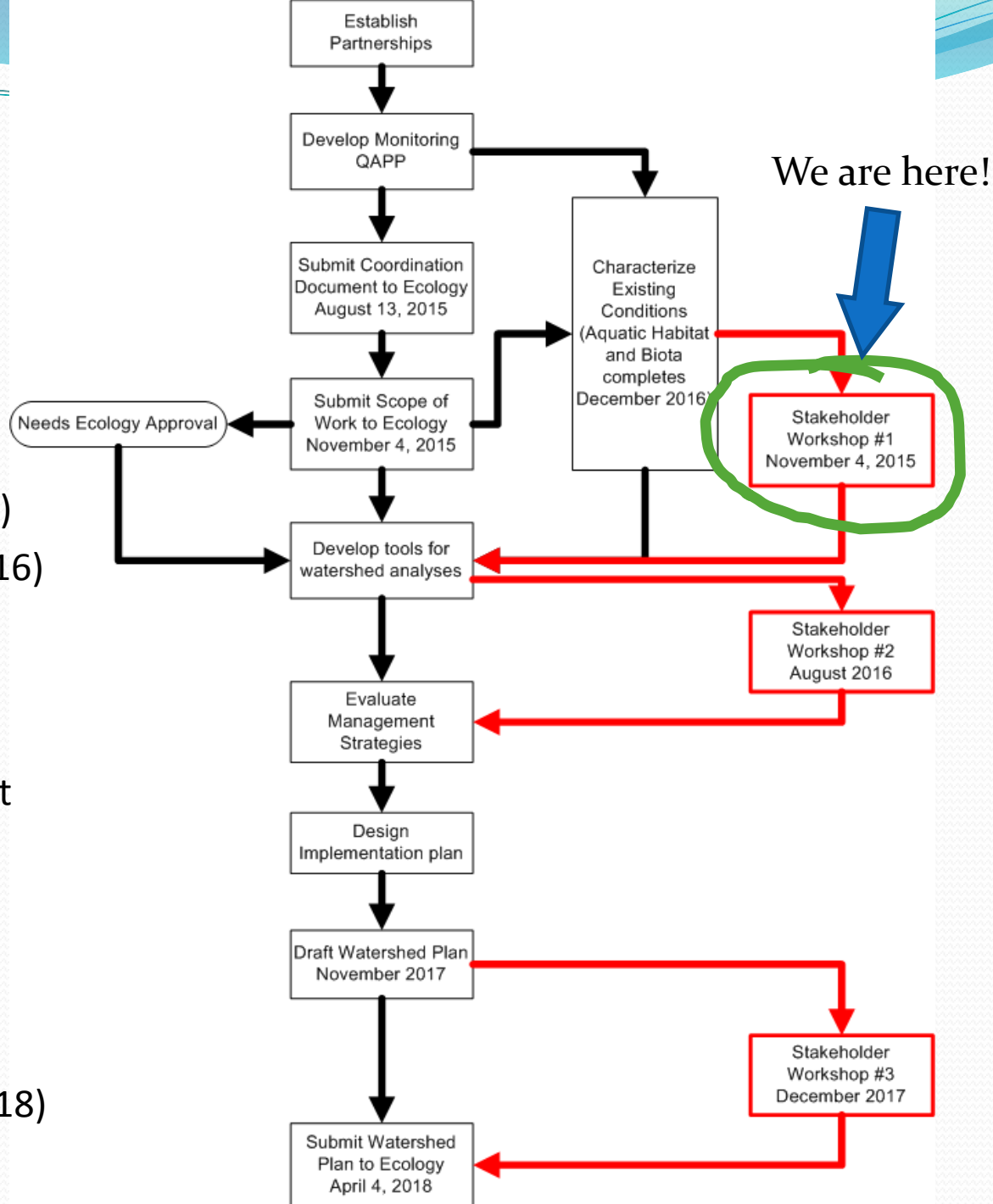
Watershed Plan Elements

- Assessment of Existing Conditions
 - Stormwater and *Habitat*
- Mapping
- Model Development
- Assessment of Historical and Future Conditions
- Develop Stormwater and Habitat Strategies
- Develop Implementation Plan and Schedule
- **A Watershed Plan!!**



Project Milestones

- Form Partnerships (Completed)
- Storm Monitoring (January 2016)
- Mapping (September 2016)
- Model Development (September 2016)
- Existing Conditions Assessment (December 2016)
- Stormwater Management Strategies and Draft Implementation Plan (March 2017)
- Final Watershed Plan (April 2018)



Anticipated Plan Outcomes

- Suggested Updates to King County Stormwater Design Manual
 - Thresholds
 - Standards
- Identification of Capital Improvement Projects
 - Stormwater (e.g., regional, distributed)
 - Habitat
- Land use management activities



Table Discussions Questions

- A. In your table groups, do you generally agree with the stated goals ? Is there something missing?
- B. What can this plan do for you or your organization?
How do you envision using this in your work?
- C. How important is this plan to your work? Scale of 1-5 with 5 being highest.
- D. What concerns do you have given some of the possible outcomes from this watershed plan?

Climate Change

- Contract with UW CIG (Bothell and Seattle) 2015-2017
- Funded by WTD and Ecology*
- Identify top 10 accurate GCM models for PNW
- Use new IPCC emission scenarios (RCP 4.5 and RCP 8.5 [W/m² at 2100])
- Statistical and Dynamic (WRF) downscale to King County lowlands
- Characterize projections of future rainfall relevant for WTD to assess potential impacts on operations. Include results in next RWSP update (2018).
- Characterize projections of future rainfall relevant for assessing impacts on Stormwater mitigation design standards. Develop guidance document for next KCSWDM update (2019)
- Deliverables include: hourly rainfall 1980-2099 for at least two climate scenarios (High-high, Low-low)
- Other projects starting include King County River Assessments
- Other jurisdictions Partnering up in the Puget Sound Region?



Thank You All!

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